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vehicles in 2020, the vehicle-traveling public is so large that these 13.4 million passengers are estimated to make up 42% of the HSR ridership. It is evident that this enormous category of intercity travelers are presently immune to the attractions of the air travel mode's advantages in travel time, reliability, and safety; thus, factors like connectivity or convenience, and principally the "key factor" of cost, must keep the predominant share of inter-city travelers in their cars. It is questionable whether the HSR system will have any greater success than the air transportation system in using its travel time, reliability, and safety advantages as bases for attracting travelers out of their cars.

The Draft concludes that the total travel cost of the HSR mode will be significantly less than the cost of air travel. Assuming this projection is accurate, HSR should experience greater success than airlines have had in attracting drivers to switch modes for intercity travel. Still, the EIR/EIS considerably understates the degree of difference between the cost of vehicle travel and the cost of HSR travel, thus painting an unduly optimistic picture of the likelihood that drivers will switch to HSR travel where they had not previously been enticed to air travel.

O024-22 cont.

Tables 3.2-17 and 3.2-18 calculate highway travel costs utilizing a "total cost based on [the] average cost of owning and operating a vehicle." The total costs of owning and operating a vehicle include components such as financing, insurance, state licensing, and—the most expensive component—depreciation. This basis of computing vehicle travel costs is irrelevant to this analysis and highly misleading. When an individual traveler conducts a practical comparison of the costs of the various modes of transit from one California city to another, the calculation is based on direct, perceived costs. No traveler can be reasonably expected to include the costs of financing, insurance, state licensing, and depreciation when calculating the cost of driving from San Francisco to Los Angeles; furthermore, these cost categories are largely fixed

for each car, and do not increase with each additional inter-city highway trip. Only those costs that are directly and tangibly incurred as a result of the highway trip undertaken (those costs that vary directly with the number of miles driven) are justifiable components of the car travel costs calculation. It is the perceived costs a car traveler experiences that legitimately factor into a relative evaluation of car travel cost versus HST cost, not the hidden and diffused total costs of car ownership.

The direct costs appropriately included in this evaluation are fuel and fuel taxes (other categories of cost that could potentially be included—such as tolls—are not reflected in Table 3.2-17). Instead of the $.51 per mile of total car operating costs, the EIR/EIS comparative evaluation should have used a $.066 per mile cost. As indicated in Table 3.2-18, the total costs of operating a car must also be divided by the average vehicle occupancy rate for intercity travel of 2.4 persons per car. It is this figure of $.0275 per car passenger per mile that establishes the proper basis for comparison against the costs of the HSR mode. Applying this cost figure to the city pair analysis in Tables 3.2-18 and 3.2-10 results in the following side-by-side comparison between car and HST travel costs:

O024-22 cont.

City Pair	Travel cost per car	Travel cost per car passenger	Travel cost per HST passenger	Car travel cost as a percentage of HST travel cost
SF—LA	$25.10	$10.46	$59	18%
Fresno—LA	$14.49	$6.03	$50	12%
LA—SD	$7.89	$3.28	$47	7%
Burbank—SJ	$21.87	$9.11	$52	18%
Sacramento—SJ	$7.76	$3.24	$48	7%

The travel cost advantage of the car over the HSR is considerable—car travel has an advantage, depending on the city pair that ranges from 82% to 93%. With such a decided advantage in a category—cost—a plainly overwhelming factor in the decision of intercity travelers to drive, the

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EIR/EIS's projections that 13.4 million travelers will be attracted out of their cars and onto the trains based on cost assessments is questionable.

Former car travelers make up a sizeable proportion of HSR ridership—42%— and so a revision of the cost comparison analysis is necessary. Furthermore, the EIR/EIS appears to assume that population growth in California over the next two decades will not see a demographics shift, which may increase the sensitivity of California's inter-city traveling population to cost considerations. **These issues raise the question—if population growth in California is substantially due to immigration, will those new residents present the same proportionate demand for inter-city travel? And ,even if the demand for inter-city travel remains proportionately constant, will those new inter-city travelers predominantly choose the car as the least-cost means of travel? These questions must be answered if the Final EIR/EIS is to be a complete and accurate report.**

O024-22 cont.

d. The Interaction of HSR & Other Transportation Systems

The Draft fails to consider how other rail plans and policies will influence the purpose of the HSR project. The Authority estimates that the HSR will serve at a minimum ten million commuter trips annually.[64] When figuring travel demand, however, the EIR/EIS neglects how demand could be effected by the California Maglev system, the Baby Bullet, and the planned improvements for other commuter systems. The CA Maglev system will be completely incompatible with the HSR. It envisions service to many of the same locations as the HSR and is projected to be completed in the same timeframe of the HSR.[65] Likewise, Caltrain is preparing to launch new, limited-stop, express trains known as Baby Bullet service that would express

O024-23

[64] *See* Draft EIR/EIS §1.1.
[65] Maglev Deployment Program—Southern California Association of Governments.

passengers between San Francisco and San Jose in less than an hour.[66] Commuter trains such as BART are also expanding and improving service. BART has plans for a Pleasant Hill Crossover project, a San Jose extension, and an Oakland Airport connector. All of these plans could potentially have a negative effect on HSR commuter ridership. Without sufficient commuter ridership, the HSR may not be needed for certain alignments making the expense of the HSR station and alignment wasteful. The Authority could counter this concern by saying that these plans will only increase connectivity and positively impact the HSR project, however, increased connectivity does not address whether certain stations and alignments would still be necessary.

If the research does show that future rail plans and policies will benefit the HSR, the EIR/EIS is still deficient because it does not take into account the cumulative effects of additional systems feeding into the stations, or the increase in HST frequency. These concerns should be addressed in the final EIR/EIS. What will happen to the current services if the HST attracts passengers away from these services? For instance, BART and Metrolink are already operating with financial shortfalls. Secondly, what will happen to the HST if it cannot attract commuter passengers away from the existing services? This is important because of the financial viability of the project. And finally, how will the cumulative impacts of the present rail projects and plans impact the functionality of the stations and the congestion caused by increased frequency?

O024-23 cont.

e. The Impact of HSR Station Options

Since ridership is central to the success of the HSR rail, the service areas and station locations should be assessed for their ridership potential. With the exception of a few illustrations such as the San Diego station location; there is little mention of the predicted

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[66] http://www.caltrain.com/info_baby_bullet.html.

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boardings and alightings for the various station options, in fact ridership is inconsistently discussed when comparing station options. Furthermore, when comparing the connectivity ability of each station, the Draft often states that the ridership for the station options will remain the same, despite the fact that the stations may differ greatly with respect to accessibility and connectivity. For example in the Bakersfield area, the Truxton station and the Golden State station are said to have similar ridership potential, yet the Truxton station would have high connectivity and would be in the center of Bakersfield. In comparison, the Golden State station would be two miles from the city center and have less accessibility. It is counterintuitive to conclude that these stations will have equal ridership potential. **The final EIR/EIS should present forecasted boardings and alightings for each potential station and discuss how differing levels of accessibility and connectivity can yield the same ridership results.**

O024-24 cont.

f. Convenience and Other Considerations of HSR Versus Vehicles

Besides business travelers, the HSR's success also depends on attracting leisure travelers; both those people that intend to visit a number of different parts of California and those who intend to visit a specific part of California for more than a brief period of time. It is implausible to assume that the proposed HSR will attract these leisure travelers. While time is not an issue, scenery usually is during leisurely travel. Most people who want to travel throughout California for pleasure are more likely to turn to a mode of transportation that goes along the coast or particularly scenic areas, not on a rail surrounded by a large wall or fence.

O024-25

The proposed HSR's ability to attract leisure travelers is also severely hampered by the fact that most California locations do not have the proper local public transportation to accommodate visitors without cars. For such visitors, renting a car for any substantial period of time, after paying for the HSR ticket, would be much more costly than simply driving to their

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destination originally. The fact that the major cities have a public transportation system is not an answer to this issue, as existence of such system does not imply that it functions well enough to attract riders who have access to alternative modes of transportation. Although BART has become a common mode of transportation in the San Francisco/Bay Area, Los Angeles and San Diego, other popular tourist destinations lack a reasonable equivalent and people traveling to the latter two destinations on the HSR will upon arrival be faced with, at best, navigating a rental car through downtown traffic. **Therefore, the proposed HSR must closely consider local transportation, and cannot reasonably proceed with the project until all localities scheduled to have a stop are fully equipped with efficient, reliable, and appealing local transportation system.**

O024-25 cont.

If it is difficult upon arrival to get to one's final destination because the local public transportation is inefficient, that person is unlikely to take the HSR again in the future. Therefore, until the cities where the HSR proposes stops have efficient and commonly used modes of public transportation, the proposed HSR will not be able to attract a substantial number of these riders. **It is imperative that the final EIR/EIS address whether the need for the proposed project is properly timed, in relation to other local, or semi-local (i.e. San Francisco to Sacramento, or Los Angeles to San Diego), transportation needs, considering the enormous expenditure of public funds and associated diversion of funds from other public projects.**

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2. Ridership Levels and Profitability

As the text of the Draft and the Business Plan,[67] as well as the verbal comments of the Project proponents and the Project management consultants make abundantly clear, the HSR system is intended to directly compete with the present principal modes of intercity transportation within California: short-haul airline flights, and vehicles. Although California's population is projected to grow substantially over the implementation period between now and 2020, population expansion, alone, cannot sustain the level of ridership projected by the Project proponents. Existing and new residents alike must be attracted out of the customary—and even culturally ingrained—auto and airplane modes of traveling between California's major cities. O024-26

The EIR/EIS does not specify the break-even threshold at which ridership is expected to meet the funding requirements of the Project. It appears that the Project proponents consider that the projected ridership revenues will exceed operating costs by a comfortable margin. The EIR/EIS anticipates that the HSR Project, once complete, will carry at least 48 million passengers annually, and generate at least $888 million in annual revenue. It is unclear, however, to what extent those projected ridership revenues will meet the funding needs of the HSR as it approaches full implementation and is operated and maintained thereafter. Nonetheless, it is clear that the ridership projections contained in the EIR/EIS, as supplemented by the somewhat more detailed information presented in the Business Plan, are a crucial determinant of the long-term success of the HSR Project.

[67] Although concentrating on the information disclosed in the EIR/EIS, this comment also refers to the High Speed Rail Authority's Business Plan. The analysis and projections of this Business Plan have been expressly incorporated into the EIR/EIS, and thus effectively form a component of the EIR/EIS. Notably, the Business Plan is explicitly referenced in the Section 3.2 discussions of travel times (e.g., at page 3.2-8), reliability (3.2-19), safety (3.2-23), connectivity (3.2-26), and travel costs (3.2-34).

The sensitivity analyses found in Section 3.3 of the Business Plan fails to provide a rigorous and complete test of ridership and revenue forecasts. The alternative assumptions the Authority used to test the sensitivity of the forecasts were adjusted only in one direction - that of making the ridership and revenue projections for high speed rail look better. The scenarios proposed in this so-called sensitivity test include higher growth rates for air and auto, longer in-flight air travel times, longer auto travel times and increased airfares; scenarios which are all favorable to the cause of building high speed rail.[68] Thus, with no surprise, the analyses resulted in rail ridership and revenue numbers that exceeded baseline forecasts.[69] O024-26 cont.

These "sensitivity analyses" fail to inform us, the public, of an issue that is critical to the project's success: the sensitivity of ridership and revenue forecasts to *adverse* conditions. In order to give the public a meaningful picture of how susceptible these numbers are to varying factors, the test should have included the impact of potential condition such as lower airfares, shorter air and auto travel times, longer rail travel times, increased capacity for air travel, and lower growth rates for air and auto travel. It is necessary that the final EIR/EIS address how improvements in others modes of travel could impact ridership and revenue forecasts. In addition, adverse conditions, at what point do ridership and revenue figures render the rail system no longer economically viable?

3. Impact of Cost Overruns and Low Ridership

The potential impact of cost overruns and minimal ridership raises serious issues that should be analyzed and explored in detail. As noted in the Business Plan, the Authority itself has O024-27

[68] HSRA supra note 3 at 3.3.
[69] Id.

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recognized that issues regarding project financing, private sector participation, and risk-taking "need clarification during the program EIR phase of the project."[70] **Given that the Authority plans to build the HSR in phases, by funding each phase in part from the profits of the prior phases, cost overruns and low ridership raise the possibility that parts of the project will not be built or that the project may be changed mid-course. Less desirable numbers for costs and ridership could also necessitate an increase in fares, which may make the train less cost-effective for many riders, the failure to fund and implement necessary environmental remediation, and the failure of the project to meet its primary objective of reducing inter-city traffic congestion for air and highway travel. Finally, the claimed environmental benefits of the HST system as compared with the No Project and Modal Alternatives may not be realized. If HST ridership levels do not meet the necessary threshold, the following claimed environmental benefits of instituting HSR would be impaired: 1) amelioration of the continued degradation of California's air quality, due to aircraft/vehicle use of fossil fuels; 2) savings in energy consumption; and, 3) reduction in land use impacts through the concentration of development in the vicinity of the HSR station hubs.**

As these issues have specific bearing on project financing, the economic viability of the project (an objective identified in the EIS/EIR), and the potential environmental amelioration that can be achieved by HSR, it is incumbent upon the Authority to address these issues. Without such analysis and a detailed plan developing specific contingency plans to address substantial cost overruns and low ridership, the public will be unable to make an

O024-27 cont.

[70] See Draft EIS/EIR, Section 6.5.

informed decision on the desirability of HSR and the Authority may be hindered in its ability to rally taxpayer support of a bond proposal to fund the rail system.

O024-27 cont.

D. Alternatives

1. Deficiencies In The "No Build Alternative" And The Need To Consider Other Less Environmentally Destructive Alternatives

CEQA sets forth a very specific directive concerning alternatives, and indicates plainly that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects."[71] Therefore, the only legal way to approve a project is to prove that none of the potential, reasonable alternatives will result in lessened impacts on the environment.

An agency fails to meet its duty to consider alternatives where it ignores obvious alternatives.[72] In addition, the range of alternatives must at least be large enough to make a reasoned choice that the project in question is the best option.[73] In this instance, there are certainly not enough alternatives considered in order to make a reasoned choice that HSR is environmentally the best option.

O024-28

The "no build" alternative described in section 2.4 is not the typical "no project" type of alternative a planner would usually considers. Generally speaking, a no build alternative involves simple maintenance of the *status quo*. However, because it is clear that population will continue to rise and people will continue increasingly to move between cities, a true "no build" project does not exist: change is inevitable. Accordingly, this Draft considers its "no build" project in

[71] CEQA, Ca. Pub. Res. § 21002.
[72] *Burkey v Ellis,* 483 F Supp 897 (1979, ND Ala) .
[73] *Id.*

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terms of a scaled-down modal alternative. It takes the cities and regions' current expansion plans and treats them as the *status quo*. This is problematic because municipalities change expansion plans all the time, making the "no build" alternative in this case a moving target rather than a static point of comparison.

The "modal alternative," as discussed in the Draft section 2.5 very curtly considers the environmental impacts of expanding effectively all existing modes of transportation, such as highways, and airport runways. Basically, the modal alternative is just a large-scale, accelerated, and exaggerated version of the "no build" alternative. It lumps every possible avenue of current expansion into one category and says that doing all of those things together or separately will not work. It does not consider the environmental impacts of each possible alternative or any logical combination of several. Further, it does not explain how expansion in areas that are already developed would be less environmentally devastating than developing in wild land neighboring and intersecting state parks. It makes no allowance for improved busing, improved local infrastructure independent of HSR, or improvements in technology that may make commuting unnecessary altogether.

O024-28

The "no build" and "modal" alternatives are the really same alternative described differently and analyzed on a separate scale and timeframe. What this boils down to is that in truth, the Draft only compares HSR to the way in which California highways and airports will inevitably evolve. Further, in its analysis, the Authority offers no concrete or specific evidence indicating that HSR will be more environmentally friendly, or that the project is even necessary given potential mitigation measures. Examining this single alternative by no means covers the range of reasonable and feasible alternatives required by NEPA and CEQA, and offering any analysis using such broad and vague strokes does not meet the disclosure and information needs

that are to be met by these statutes. In such cases, CEQA is clear: no agency should approve a project if it fails in its consideration of feasible and potentially more environmentally sound alternatives. **As a result, it is essential that the final EIR/EIS consider additional, different alternatives to the project, including: improving and/or expanding AMTRAK and other existing rail lines, the environmental effects of different alignments independently and compared to the current selected HSR route, and treating HSR as a commuter rail or expanding and encouraging city and regional commuter rail expansion. In addition, the final EIR/EIS must provide BOTH independent and comparative environmental analysis of each alternative and its relation to the chosen route and the no-build/modal alternative.**

O024-28 cont.

2. The Altamount Pass

In the early years of project consideration, the Altamont Pass route ("APR") for HSR was not only the top choice route according to the Authority, it was the most popular route among public proponents of the project.[74] Since 1996, although the APR is still generally the most popular route, it has fallen out of favor with the Authority. The reasons for this shift are unclear given the lack of project study, but it is evident that one reason southern routes are now being researched involves powerful politicking by San Jose officials who would like to see the city be the "gateway to the Bay Area." Unfortunately for those officials, NEPA and CEQA are more interested in the most environmentally beneficial solution. The statutes recognize that politics will change, but damage caused by environmentally ill-advised decisions will have a lasting, detrimental impact on the region and the entire state of California if the project fails.

O024-29

[74] *Playing Fast and Loose With Fast Trains Here*, SACRAMENTO BEE, January 25, 2004; Richard Tolmach is president of the California Rail Foundation, a non-profit organization that has promoted and planned rail service in California since 1976.

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As discussed above, planners must research the feasible alternatives to a project, and include those findings in its EIR/EIS.[75] Although dismissed by the Authority, the APR for the project is a feasible alternative. Further, since APR is both feasible and an *obvious* alternative, failure to consider is evidence of a failure on the part of the Authority to meet its alternatives analysis burden under NEPA.[76] This effectively means that the Authority is required to consider the Altamont alternative, and even without this mandate, study of the route is a highly prudent decision.

There are four primary reasons why the Altamont Pass alternative is a necessary component of the Final EIR/EIS. The first reason is that the Authority made no study of APR thorough enough to warrant its dismissal. Placing the route through the APR would shorten the trip distance to Sacramento by fifty-five miles, to Oakland by sixteen miles, and the distance of the north-south project overall by sixty miles.[77] This translates into an addition of over 100 trip-miles each way for any individual who wishes to travel from either San Francisco or San Jose to Sacramento.[78] In 1999—the year the APR dropped from consideration—the Authority indicated that APR required a capital cost investment of 2.030 billion less than Pacheco. Further, APR ran at comparable times to the Pacheco route and came in at 24 to 31 million dollars less in annual operation and maintenance costs.[79] Given the monetary and time-based advantages to the APR, it

O024-29 cont.

[75] CEQA, Ca. Pub. Res. § 21002.
[76] *Burkey v Ellis,* 483 F Supp 897. Since the *Birkey* decision in 1979, courts have held that obvious alternatives must be considered.
[77] TALC Fact Sheet, Research findings of Architecture 21, *available at* http://www.arch21.org/CaHighSpeed.dir/TALC-HSR.pdf. Architecture 21 is a planning organization dedicated to "enabling people to craft better environments." They have been working on city and regional planning projects since 1996, and have done a tremendous amount of research on the HSR project and the APR specifically.
[78] *Id.*
[79] *Id.*

seems logical that the Authority should thoroughly consider this route. Failure to do so not only fails to meet CEQA and NEPA requirements, but it is also negligent considering the millions of people living in the Altamont area—many of them commuters from Altamont to San Jose and San Francisco—who are overlooked by the failure.

The second reason is that project authorities originally indicated the APR was not feasible due to concerns over the bay-crossing component of the project; however, a bay-crossing has the potential to be both the most cost-effective and environmentally sound means of delivering trains from one place to another. The Authority cited two reasons for bay-crossing concerns: cost, and environmental impacts. The Authority claims that building a bridge across the bay would cost billions of dollars. The San Mateo County Transportation Authority, however, indicated that a new bridge for HSR would cost only $278 million dollars to build.[80] This value, combined with the roughly $1 billion tunneling cost associated with APR, is more cost effective, by several million dollars, than either of the proposed southern alignments. This is even more true if land purchases and mitigation costs associated with state park land are necessary with the lower routes. A new bay-crossing would not be more harmful to the environment than the currently planned route, and would actually result in environmental benefits.

O024-29 cont.

In the near future, the Dumbarton rail bridge may resume operation, carrying freight and Caltrains across the bay.[81] The bridge can currently sustain low-speed trains, but a new bridge would be necessary in order for HSR to run across the bay. In this case, the old bridge would be

[80] *Slow High-Speed Rail: Too Many Questions Left Unanswered*, SACRAMENTO BEE, February 2, 2004; *Dueling Bills to Decide Future of Bullet Train,* SAN MATEO COUNTY TIMES, March 10, 2004.
[81] Architect 21 guided tour of the APR option and applicable project details, *available at* http://www.arch21.org/CaHighSpeed.dir/Altamont_Tour.dir/TourRWC.html.

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removed to make room for a new bridge that may be used by freight, commuter, and HSR trains. The addition of a new rail bridge would allow also improve navigation in that area of the bay.[82] Further, rebuilding the approach embankments to the bridge could include short trestles to help restore some of the bay's natural tidal flow.[83] Finally, it is likely that construction of a new bridge would provide funding for many environmental mitigations and enhancements.[84] A final benefit of the alignment is that upon crossing the bay, the route would not traverse any property slotted for restoration.[85] All of these factors certainly indicate that further study of the bay-crossing option and the APR generally may prove to supply the most environmentally beneficial HSR option, and therefore failure to do so would be highly injudicious. O024-29 cont.

An additional argument the Authority made was that the southern routes were more attractive due to the lower degree of environmental impacts to wetlands and wilderness. In reality this decision was premature for two reasons. First, as discussed below, there is not enough information present concerning wetlands, wilderness, species, and habitat affected by HSR to know which alternative would truly be more environmentally damaging. Because the southern routes go through State Park lands and conservation areas, it is particularly imprudent to discount APR without further, in-depth study. Second, it is likely that either of the two southern routes would be more environmentally damaging—particularly to species and habitat—due to the amount of tunneling required by each route. APR would require roughly 7.7 miles of tunneling.[86] The tunneling required for the lower routes ranges from 5.2 to 16.3 miles of tunneling, roughly

[82] *Id.*
[83] *Id.*
[84] *Id.*
[85] *Id.*
[86] *See* TALC Fact Sheet, *available at* http://www.arch21.org/CaHighSpeed.dir/TALC-HSR.pdf.

12.25 miles on average.[87] The lower amount of necessary tunneling indicates not only that APR could potentially cost less, but also that the route could be less damaging to species and habitat as well. This reinforces the route's status as an *obvious* alternative the Authority must consider. Finally, failure to examine the APR thoroughly is simply imprudent—effectively begging for litigation—and evidences a lack of foresight on the parts of the Authority and its attorneys. As indicated above, failure to consider feasible alternatives, particularly *obvious* ones constitutes a failure of the agency to meet its burden under NEPA and by extension CEQA. Indeed, various groups have already threatened litigation, specifically due to a failure to consider APR.[88] Such litigation could stall the project for weeks, months, or even years, making the project even more expensive and increasing the probability of failure. **In light of these concerns, it is imperative the final EIR/EIS consider a route through the Altamont Pass as a viable alternative for the HSR. The Authority should also include in its analysis: information on environmental impacts, and a detailed comparison of the impacts information relating to the two potential southern routes, as well as a best-estimate environmental and cost comparisons between the alternatives in terms of species habitat, wetlands/wilderness damage, Cost, degree and dangers of tunneling, overall project costs, and sprawl-specific effects on the environment.** O024-29 cont.

3. Reasonable Alternatives to the Modal Alternative's Proposed Method of Increasing Aircraft Capacity to Meet Projected Intercity Air Travel Demands

The Draft assumes that additional runways will need to be built to deal with the increase in air passengers that will occur if the High-Speed Rail project is not built. There are, however, alternative methods of increasing airport passenger capacity that do not incur the environmental O024-30

[87] *Id.*
[88] *Bullet Train's Path Upsets E. Bay Leaders; MTC Votes Against Studying Route Over Altamont Pass,* ALAMEDA TIMES-STAR, June 1, 2003.

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impacts of runway construction. These methods may be environmentally superior to the high-speed rail project.

One well-recognized alternative to additional runway construction is the use of larger aircraft. Passenger capacity at airports is dependent in part on the size of aircraft used at the airports. An increase in aircraft size allows an airport to move a larger number of passengers with the same number of flights. There are environmental benefits to moving to larger aircraft as well. A San Francisco Airport study on flight delay concluded that "larger aircraft are more fuel efficient on a per seat basis, and they generally also reduce crew costs per seat.[89] Larger aircraft also reduce noise and air pollution.[90] As the number of inter-city air passengers increases, California airports should act to ensure that airlines do not simply increase the number of flights they offer while utilizing similarly sized aircraft, but instead maintain the same number of flights utilizing larger aircraft.

The Draft states that the use of larger aircraft is an infeasible solution to the demand for inter-city trips. This conclusion is reached in part because airports other than LAX and SFO would require expansion to accommodate large aircraft (defined in the Draft as able to carry between 250 and 500 passengers); however, there are two objections to this conclusion. First, the SFO to LAX route is currently the largest inter-city route in the state, and larger aircraft could be used there to alleviate increasing demand. Second, most other airports listed in the Draft are capable of using up to 250-passenger aircraft, and all are capable of carrying up to 135-passenger aircraft, but many regional carriers are currently only using 30-35 seat aircraft on these

O024-30 cont.

[89] This finding of a reduction in crew costs per seat may contradict the Draft's assertion that one of the advantages of smaller planes is reduced operating costs. *See* San Francisco Boardsailing Association, An Examination of Delays & Runway Proposals at San Francisco International Airport (SFO) 4 (Revised 3/15/01) [hereafter SFO Report]
[90] *See id.*

lines,[91] allowing for considerable expansion of capacity even without the need for the expansion of runways. While this might not alleviate all projected inter-city demand, these two factors should substantially cut into the projections for new runways.

The Draft also bases its infeasibility conclusion on an asserted recent trend toward the use of smaller aircraft for inter-city trips.[92] Yet, a recent study found that regional airlines have steadily been increasing aircraft size, replacing craft with nineteen or fewer seats with those of 30-35 seats. A recent study concludes that this trend indicates that airlines to some degree respond to increases in demand on a given route by increasing aircraft size rather than number of flights.[93] California should not expect a purely market-based response to increased passenger numbers to provide a *total* solution to airport capacity. The same study also found that increase in aircraft size has not kept pace with increases in passenger numbers.[94] Nevertheless, this finding should not be interpreted as concluding that increased aircraft size is an infeasible solution to airport capacity problems. Airports have a number of policy tools at their disposal to influence the number of flights and size of aircraft.[95]

O024-30 cont.

The larger point of both of these criticisms of the infeasibility finding share is that the finding *conceives of larger aircraft as an "all-or-nothing" alternative.*[96] It may indeed be that it

[91] SFO Report at 4.
[92] *See* Draft EIR/EIS §2-G-2, 3.
[93] "Influence of Capacity Restraints on Airline Fleet Mix"
[94] Fleet Mix at XXIII.
[95] *See id.* at XI.
[96] For example, the Draft states: "In addition, the 10 of the 18 airports that can currently accommodate medium aircraft (e.g., Boeing 757s and 767s, capable of carrying up to 250 passengers) will require landside (ground access, terminals, and gates) and airside (runways, taxiways, and navigational system improvements *to accommodate the projected representative intercity demand*. Overall, it is assumed that the improvements to the study area airports to accommodate either medium or large aircraft are infeasible and impractical because of the limited market served, high capital and operational costs of improvements, and significant environmental and land use constraints to accommodate improvements." Modal Alternative

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would be infeasible to rely *solely* on larger aircraft as an alternative; however, the larger-aircraft solution should be included as an important component of an airport expansion alternative, because of its potential to reduce the need for additional runways.

In addition to the Draft's all-or-nothing approach to the infeasibility determination, a final striking feature of its determination is that the infrastructure improvements necessary to implement the all-or-nothing approach would be infeasible because of the "limited market served" and "high capital and operational costs." Infrastructure improvements, according to the Draft definition, include gates, terminals, roadways, access, runways, and taxiways. Yet the modal alternative, which was not deemed infeasible as an alternative, would require precisely these types of improvements as well; in fact, by refusing to consider larger aircraft as a *partial* component of a solution, the modal alternative will require *more* runways and taxiways (the most environmentally damaging of the improvements), because smaller planes equals more flights.

A second opportunity to increase airport passenger capacity without increasing the number of runways comes from a more even dispersal of flights throughout the day. A recent study found that LAX could handle five times the number of passengers it currently accommodates—much more than enough to deal with the projected increases in inter-city travel—without adding new gates or even using larger airplanes if departures and arrivals were more evenly distributed throughout the day.[97] Peak period landing surcharges, for example, could encourage airlines to schedule flights more evenly throughout the day, and could also encourage use of larger aircraft with fewer flights. Once again, a more even distribution of flights will likely not, in and of itself, solve capacity problems. Peak times are peak times in at

O024-30 cont.

Aviation Improvement Option Methodology at 2-3 (emphasis added).

[97] Leaving Los Angeles at 5.1.

least some part because they are convenient for travelers. Therefore, a radical revision of flight distribution would probably be infeasible. Still, *some* adjustment of flight distribution would increase capacity to a degree, with a corresponding decrease in the need for gates or runways, and therefore a corresponding decrease in environmental impacts. For this reason, the Final EIR/EIS should consider a more even distribution of flights throughout the day as a *component* of the modal alternative.

A third method of preventing of increasing airport passenger capacity is to prevent hub airlines from scheduling more flights on smaller planes in order to squeeze out other airlines and maintain hub dominance. For example, San Francisco Airport's Delay Study found that United Airlines "intentionally operates a large number of flights on smaller planes to keep competitors out of its hub at SFO." San Francisco Airport's Delay study reported that United was unwilling to decrease the number of flights it offered from SFO, because, "if [United] were to reduce its LAX-SFO service frequency by the amount implied by [the Study's] recommendation, its competitors would jump into the market, filling the time slots opened up." This behavior becomes inexcusable as the need for additional inter-city travel capacity increases.

O024-30 cont.

With respect to reasonable alternatives, the final EIR/EIS should address the potential use of larger aircraft as a component of the modal alternative, the potential for a more even distribution of flights throughout the day as a component of the modal alternative, and the prevention of the anti-competitive technique of over-scheduling of flights as a component of the modal alternative.